

**PLEASE REWRITE THE CLAIMS SPECIFIED BELOW AS FOLLOWS:**

Claim 23<sup>20</sup> (amended): In combination for use in a system including a plurality of

vehicles each responsive to an individual address and to a plurality of commands for providing individual operations of the vehicles in accordance with such commands,

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a plurality of pads each operative to provide an address for selecting any individual one of the vehicles and to provide commands to such individual one of the vehicles for operating such individual one of the vehicles in accordance with such commands,

a central station, [connected to the pads,] the pads being connected to the central station.

10 first means in the central station for interrogating the pads to determine the address and the commands provided by such pads,

second means responsive in the central station to the interrogation provided by the first means in the central station concerning the address and the commands from each pad for sending the address and the commands from such pad to the vehicle addressed by  
15 such pad to obtain an operation of such vehicle in accordance with such commands,

the first means in the central station being operative to interrogate any additional pad connected to the central station at the instant that such additional pad is connected to the central station, and

20 the second means being responsive in the central station to the interrogation provided [on the cyclic basis] by the first means in the central station concerning the address and the commands from the pads in the plurality and from the additional pad for sending signals representing the address and the commands from each such pad to the vehicle addressed by such pad, instantaneously after the additional pad is connected to the central station, to obtain an operation of such vehicle in accordance with such commands  
25 without affecting the interrogation of the pads in the plurality by the central station.

<sup>23</sup>  
Claim <sup>20</sup>~~24~~ (amended): In a combination as set forth in claim ~~23~~,

third means in the central station for providing for the sending [transmitting] at each instant by the second means of only the commands from the pads which are providing changes in addresses or commands at that instant.

<sup>24</sup>  
5 Claim <sup>20</sup>~~25~~ (amended): In a combination as set forth in claim ~~23~~,

<sup>24</sup>  
the first means being operative to eliminate from interrogation by the central station any one of the pads disconnected in the plurality from the central station and to provide such elimination at the instant that the pad is disconnected from the central

10 station and without affecting the interrogation of the other pads by the central station and  
to provide for the addressing by any of the pads, other than the disconnected pad, of the  
vehicle previously addressed by the disconnected pad.

Claim ~~26~~<sup>27</sup> (amended): In combination for use in a system including a plurality of  
vehicles each responsive to an individual address and to a plurality of commands for  
providing individual operations of the vehicles in accordance with such commands,  
a plurality of pads each operative to provide an address for selecting any  
individual one of the vehicles and to provide commands to such individual one of the  
vehicles for operating such individual one of the vehicles in accordance with such  
commands,

a central station [connected to the pads], the pads being connected to the central  
station.

10 first means in the central station for interrogating the pads to determine the  
address and the commands provided by such pads,

second means responsive in the central station to the interrogation provided by the  
first means in the central station concerning the address and the commands from each pad  
for sending signals representing the address and the commands from such pad to the  
15 vehicle addressed by such pad to obtain an operation of such vehicle in accordance with  
such commands,

the first means in the central station being operative to eliminate, from the interrogation, any one of the pads disconnected in the plurality from the central station and to provide such elimination at the instant that the pad is disconnected from the central station and to provide such elimination without affecting the interrogation of the other pads by the central station and to provide for an addressing by any pad, other than the disconnected pad, of the vehicle previously addressed by the disconnected pad.

the second means being responsive in the central station to the interrogation provided by the first means in the central station concerning the address and the commands from each of the pads interrogated by the central station for sending the signals representing the address and the commands from each such pad to the vehicle addressed by such pad to obtain an operation of such vehicle in accordance with such commands.

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Claim, 27 (amended): In a combination as set forth in claim 26,

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third means in the central station for [transmitting] providing for the transmission at each instant by the second means only of the commands from the pads which are providing changes in addresses or commands at that instant.

Claim ~~28~~<sup>27</sup> (amended): In combination for use in a system including a plurality of

vehicles each responsive to an individual address and to a plurality of commands for providing individual operations of the vehicles in accordance with such commands,

a plurality of pads each including a first switch having [open] first and [closed]

second states and operative to provide an address to any individual one of the vehicles dependent upon the number of the operations of such switch [closures] in the second state and including [a plurality of] second switches each having [open] first and [closed] second states and operative in the [closed] second state to provide a particular operation of the individual one of the vehicles,

a central station responsive to the [closures] operation of the first switch in each of the pads in the second state for providing an address to any individual one of the vehicles dependent upon the number of operations of such first switch [closures] in such pad in the second state and responsive to the [closures] operations of the second switches in such pad in the second state for providing signals representing operations to be performed by such individual one of the vehicles, and

means responsive in the central station to the [closures] operations in the second state of [individual pairs of] the second switches providing in [each] a pair of the pads contradictory commands to the individual one of the vehicles for converting such contradictory commands to signals providing specialized commands different from the

20 commands provided by the [closure] operation of the different ones of the second switches in such pads.

*28*  
Claim ~~29~~<sup>28</sup> (amended): In a combination as set forth in claim ~~28~~<sup>27</sup>,  
means in the central station for providing at each instant only the commands from the pads which are providing changes in addresses or commands at that instant, and means in the central station for sending to the vehicles in the plurality the  
5 commands provided by the last mentioned means in the central station.

*34*  
Claim ~~36~~<sup>34</sup> (amended): In combination for use with a plurality of vehicles, a plurality of pads each operative to [identify] address any individual one of the vehicles [addressed by such pad] and to provide a plurality of binary indications providing commands for operating the [individual one of the] addressed vehicle[s identified by such address],

*32*  
a central station,

first means operatively coupled in the central station to the pads in the plurality for providing packets of signals identifying for each pad the individual one of the vehicles addressed by such pad and the commands for operating the individual one of the vehicles,  
10 and

second means responsive in each vehicle to the same identity of the signals providing the commands in two (2) successive packets addressed to such vehicle by the first means in the central station for operating such vehicle in accordance with the pattern of the signals in such packets.

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Claim <sup>35</sup>~~37~~ (amended): In a combination as set forth in claim <sup>34</sup>~~36~~,

means in the central station for interrogating the pads on a cyclic basis to obtain binary indications from each of the pads, on the cyclic basis with the other pads, of the individual one of the vehicles addressed by such pad and the binary indications providing commands for operating the individual one of the vehicles addressed by such pad.

Claim <sup>36</sup>~~38~~ (amended): In a combination as set forth in claim <sup>34</sup>~~36~~,

means in the central station for transmitting to the vehicles at each instant only the binary indications from [the pads] the pads which are providing changes in addresses or commands at that instant.

Claim <sup>41</sup>~~39~~: In a combination as set forth in claim <sup>40</sup>~~38~~,

means in the central station for simultaneously interrogating the pads to obtain simultaneous binary indications from the pads of the individual ones of the vehicles

5 *12*  
*concluded*

addressed by such pads and the binary indications providing the commands for operating the individual ones of the vehicles.

*Sub*  
*13*

5 Claim 45 (amended): [In a combination as set first in [Exhibit] claim 43] In combination for use in a vehicle for moving the vehicle in accordance with commands which are provided by a pad to control the movements of the vehicle and which are converted by a central station to commands addressed by the central station to the vehicle to obtain the movements of the vehicle,

*3*

a pair of left wheels in the vehicle, the left wheels being spaced from each other in a longitudinal direction,

a pair of right wheels in the vehicle, the right wheels having the same spacing in the longitudinal direction as the left wheels,

10 a first motor in the vehicle for moving the left wheels in the vehicle in the longitudinal direction,

a second motor in the vehicle for moving the right wheels in the vehicle in the longitudinal direction,

15 the commands addressed to the vehicle from the central station including first signals for operating the first motor and second signals for operating the second motor,

first means in the vehicle for receiving the commands addressed to the vehicle from the central station,



20 second means responsive in the vehicle to the first and second signals received by  
the vehicle from the central station for operating the first and second motors in  
accordance with such signals,

the vehicle being operative in a powered and active state and in a powered and  
inactive state,

25 third means responsive in the vehicle to the failure of the vehicle in the powered  
and active state to receive the first and second signals for a particular period of time for  
maintaining the same operation of the first and second motors for such particular period  
of time as the operation of the motors upon the last reception by the vehicle of the first  
and second signals from the central station,

30 fourth means operative at the end of the particular time period for converting the  
operation of the vehicle from a powered and active state to a powered but inactive state  
when the vehicle fails to receive the first and second signals during the particular time  
period, and

35 fourth means responsive in the vehicle to the first and second signals received by  
the vehicle from the central station for operating the first and second motors in  
accordance with such first and second signals only when the first means [receiver] has  
received the same first and second signals from the central station a plurality of  
successive times.

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Contd

Claim 46 (amended): In combination,

a plurality of [hand held] pads,

a plurality of vehicles,

each of the [handheld] pads providing first binary indications representing [a

5 selection] an address of any individual one of the vehicles and second binary indications representing individual operations to be provided by such vehicle,

10 a central station responsive to the first and second binary indications from the different pads [on a cyclic basis] for producing for each of the pads first signals providing an individual address for the individual one of the vehicles [selected] addressed by such pad and second signals providing commands for moving such vehicle in a particular direction and for operating such vehicle,

15 means responsive in each of the vehicles to the first signals addressing such vehicle from the central station and to the second signals from the central station for such vehicle for moving such vehicle and operating such vehicle in accordance with the commands provided by the central station to such vehicle, and

means operative in each of the vehicles for continuing to provide a movement of such vehicle for a particular period of time in accordance with the last commands addressed to such vehicle by the central station when the vehicle fails to receive any commands addressed to such vehicle during such particular period of time, and

means in the central station for providing for the transmission to the vehicle from the central station only changes in the address or commands received by the pad from the address or commands previously provided by the pad.

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Claim ~~47~~ (amended): In a combination as set forth in claim ~~46~~,  
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means in each of the vehicles for providing for an operation of such vehicle in  
[the] an inactive but powered state at the end of the particular period of time when such  
vehicle fails to receive any commands addressed to such vehicle during such particular  
period of time.

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could  
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Claim ~~48~~ (amended): In a combination as set forth in claim ~~46~~,  
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means responsive in each of the vehicles to the commands addressed to the  
vehicle relating to movements of the vehicle at a particular speed for accelerating the  
vehicle in progressive increments to the particular speed [to obtain such movements].

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K4  
Claim 49 (amended): In combination,  
a plurality of [handheld] pads,  
a plurality of vehicles,  
each of the [handheld] pads providing first binary indications representing a  
selection of any individual one of the vehicles and second binary indications representing  
individual operations to be provided by such vehicle,

10 a central station responsive to the first and second binary indications from the different pads [on a cyclic basis] for producing for each of the pads first signals providing an individual address for [the] any individual one of the vehicles selected by such pad, the pads being connected to the central station.

15 each of the vehicles including a pair of left wheels spaced from each other in a longitudinal direction and a pair of right wheels spaced from each other in the longitudinal direction and including a first motor for moving the left wheels and a second motor for moving the right wheels,

the commands addressed to the vehicle from the central station including second signals for operating the first motor and third signals for operating the second motor, first means in each of the vehicles for receiving the first, second and third signals addressed to such vehicle from the central station, and

20 second means responsive in each of the vehicles to the second and third signals received by the vehicle from the central station for [normally] accelerating the first and second motors in progressive increments to the speeds commanded by the central station to such motors for movement of such vehicle in the longitudinal direction.

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Claim 50: In a combination as recited in claim 48,

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third means responsive in each of the vehicles to the second and third signals received by such vehicle from the central station for movement of such vehicle in the

longitudinal direction for operating the first and second motors at the same speed, without  
5 any progressive increments in speed, when one of the motors in such vehicle has been  
previously operated at a different speed than the other motor in such vehicle, the same  
speed constituting the higher of the speeds provided by the first and second motors in  
such vehicle.

*13*  
*Cont'd*  
Claim ~~51~~<sup>49</sup> (amended): In a combination as set forth in claim [49] ~~50~~<sup>48</sup>,

means operative in each of the vehicles for continuing to operate the first and  
second motors for a particular period of time in accordance with the last ones of the  
second and third signals received by such vehicle from the central station when such  
5 vehicle fails to receive the second and third signals addressed to such vehicle during such  
particular period of time.

<sup>50</sup>  
Claim ~~52~~ (amended): In combination,  
a plurality of [hand held] pads,  
a plurality of vehicles,  
each of the [hand held] pads providing first binary indications representing a  
5 selection of any individual one of the vehicles and second binary indications representing  
individual operations to be provided by such vehicles,

10 a central station responsive to the first and second binary indications from the different pads [on a cyclic basis] for producing for each of the pads first signals providing an individual address for [the] any individual one of the vehicles selected by such pad and second signals providing commands for moving such vehicle in a particular direction and for operating such vehicle,

first means in each of the vehicles for receiving the first and second signals from each of the pads,

15 second means responsive in each of the vehicles to the second signals addressed to such vehicle for determining whether successive ones of the second signals addressed to such vehicle [on the cyclic basis] are identical, and

20 third means in each of the vehicles for operating such vehicle in accordance with the second signals addressed to such vehicle when the second means in such vehicle determines that the successive ones of the second signals addressed to such vehicle [on the cyclic basis] are identical.

<sup>51</sup>  
Claim ~~53~~ (amended): In a combination as set forth in claim <sup>50</sup>~~52~~,

the third means in each of the vehicles being operative to operate such vehicle in accordance with the second signals addressed to such vehicle in the second of the successive ones of the second signals addressed to such vehicle [on the cyclic basis] when

5 the second means in such vehicle determines that the successive ones of the second signals addressed to such vehicle [on the cyclic basis] are identical.

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contd. K

Claim <sup>52</sup>54 (amended): In a combination as set forth in claim <sup>50</sup>52, *successive*  
the first and second signals for each of the vehicles being in the form of packets  
each having a first particular number of the first signals and a second particular number of  
the second signals,

5 fourth means for determining whether at least a particular percentage of the packets addressed to each of the vehicles has the first particular number of the first signals and the second particular number of the second signals in such packets during a particular period of time, and

10 fifth means for operating each of the vehicles in accordance with the second signals in the packets addressed to such vehicle when the fourth means in such vehicle determines that at least the particular percentage of the packets addressed to such vehicle during the particular period of time has the first particular number of the first signals and the second particular number of the second signals in the packets [during the particular period of time].

Claim <sup>53</sup>~~55~~ (amended): In combination,

a plurality of [hand held] pads,

a plurality of vehicles,

each of the [hand held] pads providing first binary indications representing [a selection] an addressing of any individual one of the vehicles and second binary indications representing individual operations to be provided by such addressed vehicle[s],

a central station responsive to the first and second binary indications from the different pads [on a cyclic basis] for producing for each of the pads [on the cyclic basis] first signals providing an individual address for [the] any individual one of the vehicles selected by such pad and second signals providing commands for moving such vehicle in a particular direction and for operating such vehicle,

first means in each of the vehicles for receiving the first and second signals from each of the pads,

the first and second signals for each of the vehicles being in the form of packets each having a first particular number of the first signals and a second particular number [member] of the second signals,

second means for determining whether at least a particular percentage of the <sup>successive</sup> packets addressed to each of the vehicles during a particular period of time has the first



20 particular number of the second signals in each packet [during a particular period of time], and

third means for operating each of the vehicles in accordance with the second signals in the packets addressed to such vehicle when the [fourth] second means in each vehicle determines that at least the particular percentage of the packets addressed to such vehicle during the particular period of time has the second particular number of the second signals in the packets [during the particular period of time].

54  
Claim ~~56~~<sup>54</sup> (amended): In a combination as set forth in claim ~~58~~<sup>53</sup>,

the central station being operative to interrogate each of the pads [on the cyclic basis] to determine the first and second binary indications from such pad[s], and

5 means in the central station for sending to the vehicles at each instant only the [second] binary indications representing changes in the addresses or commands from the pads at that instant.

59  
Claim ~~61~~<sup>59</sup> (amended): In combination in a vehicle for use with a central station

operative to receive, from a plurality of pads [on a cyclic basis], first binary indications representing the address of the vehicle and second binary indications representing operations to be performed by the vehicle and for sending first signals in accordance with

5 the first binary indications and second signals in accordance with the second binary indications,

first means in the vehicle for receiving the first and second signals from the central station in representation of the binary indications from each of the pads,

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10 the first and second signals for the vehicle being in the form of packets each having a first particular number of the first signals and a second particular number of the second signals,

second means in the vehicle for determining whether at least a particular percentage of the packets addressed to the vehicle during a particular period of time has the second particular number of the second signals in such packets [during a particular  
15 period of time], and

third means in the vehicle for operating the vehicle in accordance with the second signals in the packets addressed to such vehicle when the second means in such vehicle determines that at least the particular percentage of the packets addressed to such vehicle during the particular period of time has the second particular number of the second  
20 signals in the packets [during the particular period of time].

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Claim ~~62~~<sup>60</sup>: In a combination as set forth in claim ~~61~~<sup>59</sup>,

the vehicle including wheels and motors for rotating the wheels and including at least one member movable on the vehicle to perform selective functions,

the third means being responsive in the vehicle to the second signals for rotating the wheels in the vehicle to obtain a movement of the vehicle in accordance with such wheel rotations and for moving the member to perform the selective functions.

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Amended

92  
Claim 92 (amended): In combination for use with a plurality of vehicles each having an individual address and each operable when receiving the individual address, a central station,

a plurality of pads each [manually] operable to address any individual one of the vehicles and each providing commands to operate the individual one of the vehicles,

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each of the pads being connected to the central station for receiving power from the central station to provide first binary indications addressing [the] any individual one of the vehicles and second binary indications providing commands for operating the individual one of the vehicles,

10  
first means in the central station for interrogating each of the pads, separately from the interrogations of the other pads, to determine the first and second binary indications from such pad,

second means in the pads for transmitting the first and second binary indications from the pads to the central station upon the interrogation of the pads by the central station,

third means in the central station for transmitting to the vehicles signals representing the first and second binary indications determined from each of the pads, the central station and the pads being constructed to provide for the connection of an additional pad to the central station,

20 the first means in the central station being operative to interrogate the pads in the plurality and the additional pad [upon] instantaneously after the connection of the additional pad to the central station,

25 the second means in the pads being operative to transmit the first and second binary indications from the pads in the plurality and the additional pad to the central station instantaneously after [upon] the connection of the additional pad to the central station, and

30 the third means in the central station being operative to transmit signals representing the first and second binary indications from the pads in the plurality and the additional pad to the vehicles in the plurality instantaneously after [upon] the connection of the additional pad to the central station.

93  
Claim 93 (amended): In a combination as set forth in claim 92,

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the first means being operative to interrogate the pads in the plurality on a cyclic basis before the connection of the additional pad to the central station and to interrogate

the pads in the plurality and the additional pad on the cyclic basis instantaneously after  
5 the connection of the additional pad to the central station.

<sup>94</sup>  
Claim ~~94~~ (amended) In a combination as set forth in claim ~~92~~,<sup>92</sup>

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the first means being operative to interrogate the pads in the plurality  
simultaneously before the connection of the additional pad to the central station and to  
interrogate simultaneously the pads in the plurality and the additional pad  
[simultaneously] instantaneously after the connection of the additional pad to the central  
station.

<sup>95</sup>  
Claim ~~95~~ (amended): In a combination as set forth in claim ~~92~~,<sup>92</sup>

fourth means in each of the pads for providing for an illuminated indication in  
such pad of [the] any individual one of the vehicles addressed by such pad,

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fifth means in the central station for providing in such pad an illumination  
indicating [the] any individual one of the vehicles addressed by such pad,

the fifth means in the central station being operative to continue the illumination  
of the vehicles addressed by the pads in the plurality and to provide an illumination of the  
vehicle addressed by the additional pad instantaneously after [when] the additional pad is  
connected to the central station.

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Claim 100 (amended): In combination for use with a plurality of vehicles,

a plurality of pads each operative to provide a first plurality of binary indications addressing any individual one of the vehicles and to provide a second plurality of binary indications providing commands to such individual one of the vehicles for operating such vehicle,

a central station,

the pads in the plurality being connected to the central station,

first means in the central station for interrogating the pads to determine the first and second binary indications from such pads,

second means in the pads for transmitting the first and second binary indications from the pads to the central station, and

third means responsive in the central station to the identities of the first binary indications in successive transmissions of the first and second binary indications from each individual one of the pads to the central station for transmitting to the vehicles signals representing the first and second binary indications for such pad [to the vehicles in the plurality],

fourth means in the central station for providing a transmittal by the second means at each instant only of the second binary indications from the pads which are providing changes in address or commands at that instant.

99  
Claim ~~100~~<sup>99</sup> (amended): In a combination as set forth in claim ~~100~~<sup>96</sup>,

the first means in the central station being operative to simultaneously interrogate the pads to obtain simultaneously from the pads the first binary indications providing the addresses for the individual ones of the vehicles and the second binary indications providing the commands for operating the individual ones of the vehicles.

22  
Claim ~~107~~<sup>22</sup> (amended): In a combination as provided in claim ~~216~~<sup>20</sup>,

the first means being operative to interrogate the pads [on a cyclic basis] in the plurality and the additional pad simultaneously, the second means being responsive to the simultaneous interrogation provided by the first means of the pads in the plurality and the additional pad for sending the addresses and commands to the addressed vehicles to obtain an operation of such vehicles in accordance with such commands.

103  
Claim ~~108~~<sup>103</sup> (amended): In combination for use in a system including a plurality of vehicles each responsive to an individual address and to a plurality of commands for providing individual operations of vehicles in accordance with such commands, a plurality of pads each operative to provide an address for selecting any individual one of the vehicles and to provide commands to such individual one of the

vehicles for operating such individual one of the vehicles in accordance with such commands,

a central station [connected to the pads] the pads being connected to the central station,

10 first means in the central station for interrogating the pads [on a cyclic basis] to determine the address and the commands provided by such pads,

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15 second means responsive in the central station to the interrogation provided by the first means in the central station concerning the address and the commands from [such] each pad for receiving the address and the commands from such pad and for transmitting to the vehicles signals representing the address and the commands from such pad [to the vehicles in the plurality], and

20 third means responsive in the central station to any change in the address or commands from an individual one of the pads for transmitting the address and the commands from such pad to the vehicles in the plurality on a priority basis relative to the address and commands from the other pads in the plurality.

105 103  
Claim ~~109~~ (amended): In a combination as set forth in claim ~~108~~ wherein

the central station discontinues [the] an interrogation of any pad which is disconnected from the central station instantaneously after the pad is disconnected from the central station and wherein



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the central station provides for the addressing by any of the pads still connected to the central station of the vehicle previously addressed by the disconnected pad.

<sup>106</sup> Claim ~~110~~ In a combination as set forth in claim <sup>103</sup> ~~108~~ wherein

the central station transmits the address and commands from the individual one of the pads in the plurality to the vehicles in the plurality only when the central station has completed the transmission to the vehicles in the plurality of the address and commands of the pad whose address and commands the central station has been transmitting at the time that the central station receives the change in the address and the commands from the individual one of the pads in the plurality.

<sup>8</sup>  
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Control

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Claim 111 (amended): In combination for use in a system including a plurality of vehicles each responsive to an individual address and to a plurality of commands for providing individual operations of vehicles in accordance with such commands, a plurality of pads each operative to provide an address for selecting any individual one of the vehicles and to provide commands to such individual one of the vehicles for operating such individual one of the vehicles in accordance with such commands,

5 a central station [connected to the pads,] the pads being connected to the central station.

10 first means in the central station for interrogating the pads [on a cyclic basis] to  
determine the address and the commands provided by such pads,

second means responsive in the central station to the interrogation provided by the  
first means in the central station concerning the address and the commands from such  
pads for receiving the address and the commands from such pads and for transmitting the  
15 address and the commands from such pads to the vehicles in the plurality, and

third means responsive in the central station to the [coupling] connection of an  
individual one of the pads to the central station and to the reception by the [such] central  
station of the [an] address and commands from such individual one of the pads for  
transmitting such address and commands from such individual one of the pads on a  
20 priority basis relative to the transmission of the address and commands from the other  
ones of the pads.

108 107  
Claim 112 (amended): In a combination as set forth in claim 111 wherein

the central station is operative to transmit [for transmitting] to the vehicles at each  
instant only the addresses and commands from the pads which are providing changes in  
addresses or commands at that instant.

109  
Claim ~~113~~ (Amended): In a combination as set forth in claim ~~111~~ wherein

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the central station transmits the address and commands from the [individual one of the] additional pad [stations in the plurality] to the vehicles in the plurality only when the central station has completed the transmission to the vehicles in the plurality of the address and commands of the pad in the plurality whose address and commands the central station has been transmitting to the vehicles at the time that the central station receives the address and the commands from the additional pad [individual one of the pads in the plurality].

110  
Claim ~~122~~ (amended): In combination for use in a system including a plurality of vehicles each responsive to an individual address and to a plurality of commands for providing individual operations of the vehicles in accordance with such commands,  
a plurality of pads each operative to provide an address for selecting any individual one of the vehicles and to provide commands to such individual one of the vehicles for operating such individual one of the vehicles in accordance with such commands,

10  
a central station [connected to the pads], the pads being connected to the central station,

first means in the central station for interrogating the pads to determine the address and the commands provided by such pads,

second means responsive in the pads to the interrogation by the central station for transmitting the address and the commands from the pads to the central station,

third means in the central station for receiving the addresses and the commands transmitted by the pads to the central station, and

fourth means in the central station for transmitting to the vehicles in the plurality only the address and commands transmitted from each pad to the central station that are different from the immediately preceding address or commands transmitted from such pad to the central station.

<sup>11</sup> Claim ~~123~~<sup>11</sup> (amended): In a combination as set forth in the claim ~~122~~<sup>110</sup>,

the first means in the central station being operative to interrogate the pads simultaneously [on a cyclic basis] and the pads being operative to transmit the addresses and the commands from such pads to the central station when interrogated.

<sup>114</sup> Claim ~~126~~ (amended): In combination,

a plurality of vehicles each having an individual address,

a plurality of pads each operative to provide an address for selecting any individual one of the vehicles and to provide commands to such individual one of the vehicles for operating such individual one of the vehicles in accordance with such commands,

a central station [connected to the pads], the pads being connected to the central station.

each of the pads being operative to transmit the address and the commands from such pad to the central station for transmission by the central station to the vehicles,

each individual one of the vehicles having a light for illumination when such vehicle is addressed and commanded by the central station as a result of the address and commands from an individual one of the pads,

first means in the central station for storing the addressing by each individual one of the pads of the individual one of the vehicles,

second means in the central station for communicating a command to the individual one of the vehicles to extinguish the light in such vehicle instantaneously after [when] the individual one of the pads providing the address and the commands to such individual one of the vehicles becomes disconnected from the central station, and

third means in each individual one of the vehicles for extinguishing the light in such individual one of the vehicles in accordance with the communication from the central station.

115  
Claim 127 (amended): In a combination as set forth in claim 126,

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fourth means in the central station for eliminating the storage of the addressing by  
each individual one of the pads of the individual one of the vehicles instantaneously after  
[when] such individual one of the pads becomes disconnected from the central station.

Sub  
Kb  
Claim 146 (amended): In combination for use with a plurality of pads each  
operative to provide an address and commands and a central station for transmitting at a  
particular frequency a carrier signal modulated with the addresses and commands from  
the pads,

a vehicle,

10  
means in the vehicle for receiving from the central station the carrier signals  
modulated with the address individual to such vehicle,

means for powering the vehicle in accordance with the reception by such vehicle  
of the modulated carrier signals individual to such vehicle,

15  
means in the vehicle for demodulating the modul[ing]ed carrier signals to  
recover the commands individual to such vehicle,

the vehicle including wheels for moving the vehicle and including motors for  
rotating the wheels,

means in the receiv[er]ing means for providing pulse width modulations for  
energizing the motors in the vehicle to move the vehicle, the pulse width modulations  
addition is one of  
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20 *in the pulse width*  
 providing progressive increments of time for energizing the motors to accelerate the vehicle, and

*means in the receiving means for progressively energizing the motors with the pulse with modulations for the progressive increments of time to accelerate the motors.*  
*in the pulse width*

*Sub K6*  
*Concise*  
 Claim 147 (Amended): In a combination as set forth in claim 146, the vehicle[s] being progressively energized with the pulse width modulations for the progressive increments of time from a zero time in the pulse width modulations to accelerate the motors in the vehicle.

104  
 5 Claim 154: In a combination as set forth in claim 103 wherein

*13*  
 the central station initiates an interrogation of any pad which is connected to the central station, instantaneously after the pad is connected to the central station, to determine if the pad has addressed any one of the vehicles not then being addressed by any of the other pads.

Claim 155: In combination for use with a plurality of vehicles each having an individual address and having members for moving the vehicles,  
 a central station,  
 a plurality of pads each operatively connected to the central station and each

5 operative to provide addresses individual to any one of such vehicles and to provide commands for operating such vehicle,

the central station being operative to receive the addresses and commands from the pads and to transmit to the vehicles addresses and commands in packets each composed of a plurality of binary indications representing the address and the commands for an individual one of the vehicles,

10 means in the central station for transmitting the packets of the binary indications to the vehicles,

each of the pads including a switch actuable a number of times to select any one of the vehicles, the particular number of times being dependent upon the particular one of the vehicles to be addressed by the pad,

15 memory means in the central station for remembering each of the vehicles addressed at any instant and the pad addressing the vehicle, and

means in the central station for preventing each of the pads from addressing one of the vehicles already being addressed by another one of the pads.

Claim 156 (Twice Amended): In combination for use with a plurality of vehicles each having an individual address and having members for moving the vehicles, a central station, a plurality of pads each operatively connected to the central station and each



5 operative to provide addresses individual to any one of such vehicles and to provide commands for operating such vehicle,

13  
Cont'd  
10 the central station being operative to receive the addresses and commands from the pads and to transmit to the vehicles addresses and commands in packets each composed of a plurality of binary indications representing the address and the commands for an individual one of the vehicles,

means in the central station for transmitting the packets of the binary indications from each of the pads to the vehicles in the plurality,

15 each of the pads including a switch actuatable a number of times to select any one of the vehicles, the particular number of times being dependent upon the particular one of the vehicles to be addressed by the pad,

memory means in the central station for remembering each of the vehicles addressed at any instant and the pad addressing the vehicle, and

means in the central station for preventing each of the pads from addressing one of the vehicles already being addressed by another one of the pads,

20 there being a plurality of light illuminable members in each pad, each of the light illuminable members being operable, when illuminated, to indicate an individual one of the vehicles,

the preventing means in the central station being operable to prevent each pad  
25 from illuminating light illuminable members individual to vehicles being addressed by  
the other pads.

Claim 157. In combination for use with a plurality of vehicles each having an  
individual address and having members for moving the vehicles,

a central station,

5 a plurality of pads coupled to the central station, each of the pads having a first  
member actuatable a sequential number of times to address any one of the vehicles  
dependent upon the number of actuations and having second members actuatable to  
provide for a movement of the addressed vehicle,

means in the central station for interrogating the pads to determine the number of  
10 actuations of the first member in each of the pads and to determine the actuations of the  
second members in each of the pads,

means in the central station for providing for each of the pads first binary  
indications addressing the vehicle being selected by the pad and second binary indications  
relating to the movements to be provided in the vehicle,

15 means in the central station for remembering each pad and the vehicle selected by  
the pad and for providing for the transmittal of such information to the pads, and

means responsive in the pads to the remembered information transmitted to the pads from the central station for skipping in each pad the binary indications of vehicles already being addressed by others of the pads when the first member in the pad is actuated the sequential number of times.

121

Claim 159: In combination for use in a system including a plurality of vehicles each responsive to an individual address and to a plurality of commands for providing individual operations of such vehicles in accordance with such commands,

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a plurality of pads, each individual one of the pads including a plurality of switches having first and second states of operation for providing an address to select any individual one of the vehicles and for providing commands to such individual one of the vehicles for operating such individual one of the vehicles in accordance with such commands,

10  
a central station, the pads being connected to the central station for interrogation simultaneously by the central station concerning the states of operation of the switches in the pads,

first means responsive in the pads to the simultaneous interrogation by the central station of the states of operation of the switches in the pads for transmitting to the central station binary indications of such states of operation, and

15

second means responsive in the central station to the binary indications of the states of operation of the switches in the pads for transmitting to the vehicles signals representing such binary indications.

*122*  
Claim ~~160~~<sup>122</sup>: In a combination as set forth in claim ~~159~~<sup>121</sup>,

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the first means being responsive in the pads to the simultaneous interrogations by the central station of the states of operation of the switches in the pads for simultaneously transmitting to the central station the binary indications of the states of operation of the switches in the pads in the plurality.

*123*  
Claim ~~161~~<sup>123</sup>: In a combination as set forth in claim ~~159~~<sup>121</sup>,

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the second means being responsive in the central station to the simultaneous transmission to the central station of the binary indications of the states of operation of the switches in the pads in the plurality for transmitting to the vehicles in sequence the signals representing such binary indications for the different pads in the plurality.